

PRINTER RUSH

(PTO ASSISTANCE)

Application : 10/729,360 Examiner : Shrivastav GAU : 2859
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[RUSH] MESSAGE:

The specification does not contain a
paragraph referring to colored drawings as
required per 37 CFR 1.84(a)(2)(iv).

Thank you,
MR

[XRUSH] RESPONSE:

corrected

See attachment

INITIALS: KP

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REV 10/04

of either of the initial RF inversion pulse or the plurality of successively applied RF inversion pulse sets.

In particular embodiments, such acquiring of image data includes acquiring one of a plurality of slices or multiple sections of 3-dimensional MR image data following in a time sequence the application of either of the initial RF inversion pulse or the plurality of successively applied RF inversion pulse sets. Also, the acquiring of image data is performed such that one of the plurality of slices or 3-D image data acquisitions occurs at a time preceding the zero-crossing point for longitudinal magnetization of either of the initial RF inversion pulse or the plurality of successively applied RF inversion pulse sets and so each of the other of the plurality of slices and 3-D image data acquisitions occurs at or following said zero-crossing point for the longitudinal magnetization, depending on the tolerance to small variation around zero of the specific selected tissues, fluid or body component to be nulled.

Also features are systems, apparatuses and devices related thereto and embodying such methods. In particular embodiments, there is featured a MRI/ NMRI system including a controller that controls functionalities of the system including gradient coils, apparatuses or devices for generating RF pulses and the signal receiving portions thereof. Such a controller is configured and arranged so as to embody the methodology of the present invention including the sequencing of the one or more inversion pulses following the initially applied inversion pulse and the interleaving or sequencing of excitation pulse and MR data acquisitions so as to occur at the timings of the present invention.

Other aspects and embodiments of the invention are discussed below.

BRIEF DESCRIPTION OF THE DRAWING

For a fuller understanding of the nature and desired objects of the present invention, reference is made to the following detailed description taken in conjunction with the accompanying drawing figures wherein like reference character denote corresponding parts throughout the several views and wherein:

Figs. 1A-C are various time dependent graphs illustrating the time course of inversion-recovery signals from blood and tissue after a single inversions pulse using

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the office upon request and payment of the necessary fee.